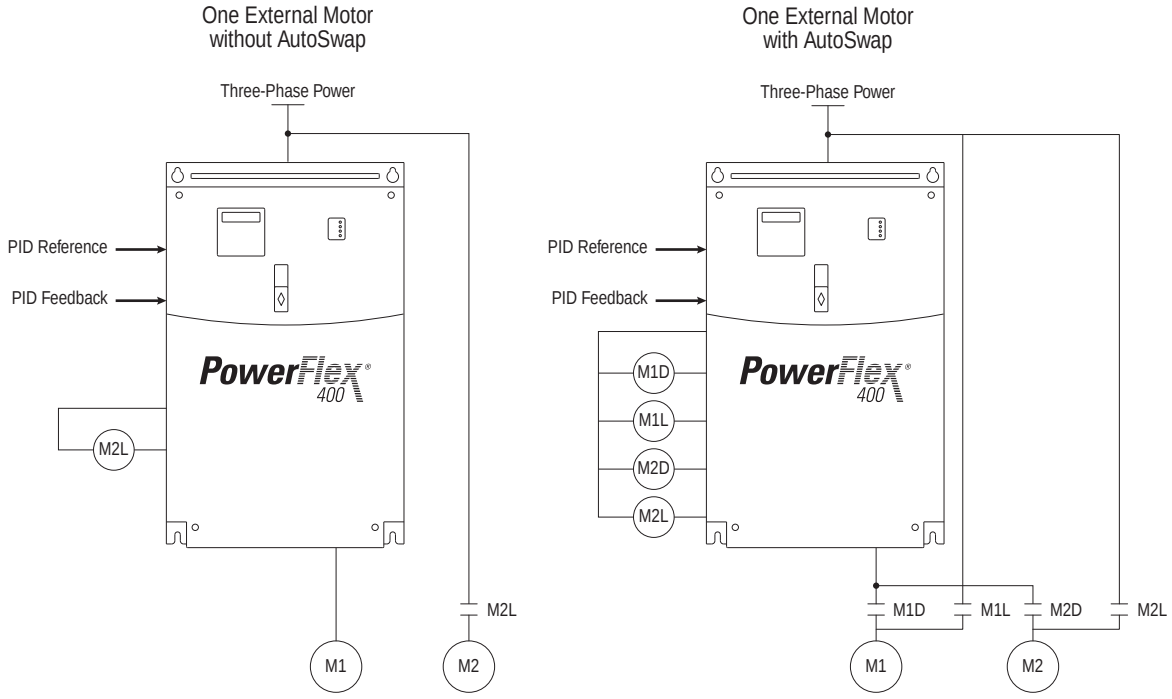
Auxiliary Motor Control

The PowerFlex 400 has a built in Auxiliary Motor Control feature. This feature allows operation of up to three (3) line-started motors in addition to the motor controlled directly by the PowerFlex 400 drive. System output can vary from 0% (auxiliary motors off and drive-controlled motor at zero speed) to 400% (3 auxiliary motors and drive-controlled motor at full speed). When Auxiliary Motor Control is enabled, the internal PID controller in the PowerFlex 400 uses a reference and feedback signal to adjust the speed of the drive controlled motor such that the feedback signal follows the reference signal. When demand exceeds the first motors capacity, the PowerFlex 400 Auxiliary Motor Control automatically starts an auxiliary motor. The speed of the drive controlled motor is reduced to account for the auxiliary motors additional output to the system. If demand continues to increase, the PowerFlex Auxiliary Motor Control starts additional motors using the same process. When demand decreases, an auxiliary motor is stopped and the PowerFlex Auxiliary Motor Control increases the speed of the drive controlled motor to account for lost system output. A Motor Interlock input identifies motors that are out of service and causes them to skipped over to the next available motor.

An AutoSwap function also can be used which allows equal wear to be placed on each motor by periodically swapping the drive controlled and auxiliary motors. Each motor in the system will over time be connected to the PowerFlex 400 drive and also directly to the AC line. During an AutoSwap, the motor directly connected to the PowerFlex 400 drive is stopped and the contactor is opened. The contactor of the next motor that will be controlled by the PowerFlex 400 drive is opened if running across the AC line. A contactor is closed connecting this motor directly to the PowerFlex 400 drive and is started. An additional motor is line started if required.



Catalog Number Explanation

Position Number

1-3	4	5	6-8	9	10	11	12
22C	–	D	038	A	1	0	3
a		b	c	d	e	f	g

a

Drive	
Code	Type
22C	PowerFlex 400

b

Voltage Rating		
Code	Voltage	Ph.
B	240V ac	3
D	480V ac	3

c1

Rating			
200…240V Input			
Code	Amps	kW (Hp)	Frame
012	12	2.2 (3.0)	C
017	17.5	3.7 (5.0)	C
024	24	5.5 (7.5)	C
033	33	7.5 (10)	C
049	49	11 (15)	D
065	65	15 (20)	D
075	75	18.5 (25)	D
090	90	22 (30)	D
120	120	30 (40)	E
145	145	37 (50)	E

c2

Rating			
380…480V Input			
Code	Amps	kW (Hp)	Frame
6P0	6.0	2.2 (3.0)	C
010	10.5	4.0 (5.0)	C
012	12	5.5 (7.5)	C
017	17	7.5 (10)	C
022	22	11 (15)	C
030	30	15 (20)	C
038	38	18.5 (25)	D
045	45.5	22 (30)	D
060	60	30 (40)	D
072	72	37 (50)	E
088	88	45 (60)	E
105	105	55 (75)	E
142	142	75 (100)	E
170	170	90 (125)	F
208	208	110 (150)	F
260	260	132 (200)	G
310	310	160 (250)	G
370	370	200 (300)	H
460	460	250 (350)	H

d

Enclosure	
Code	Enclosure
N	Panel Mount - IP20, NEMA/UL Type Open ∗
A	Panel Mount - IP30, NEMA/UL Type 1 ❄
F	Flange Mount - IP20, NEMA/UL Type Open ‡

∗ Frame C drives only available with IP20, NEMA/UL Type Open enclosure. Field installed conversion kit available to achieve IP30, NEMA/UL Type 1 rating.

❄ Frame D, E and F drives only available with IP30, NEMA/UL Type 1 enclosure.

‡ Frame C drives only.

e

HIM	
Code	Interface Module
1	Fixed Keypad

f

Emission Class	
Code	Rating
0	Not Filtered

g

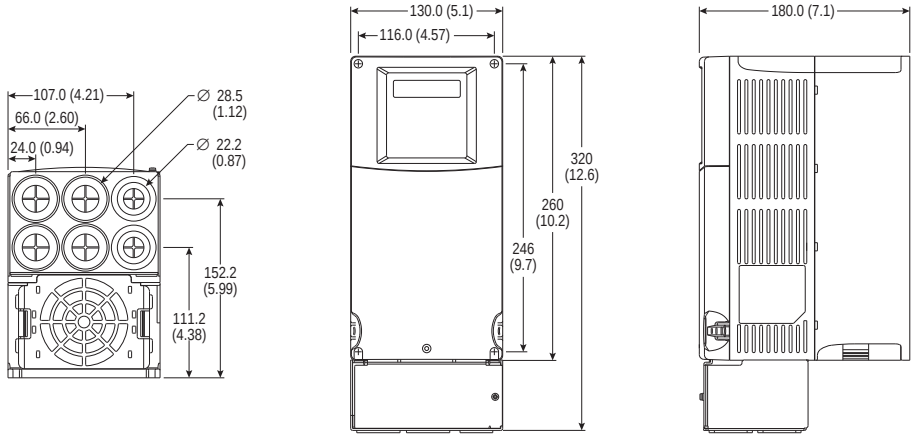
Version	
Code	Version
3	RS485

Approximate Dimensions

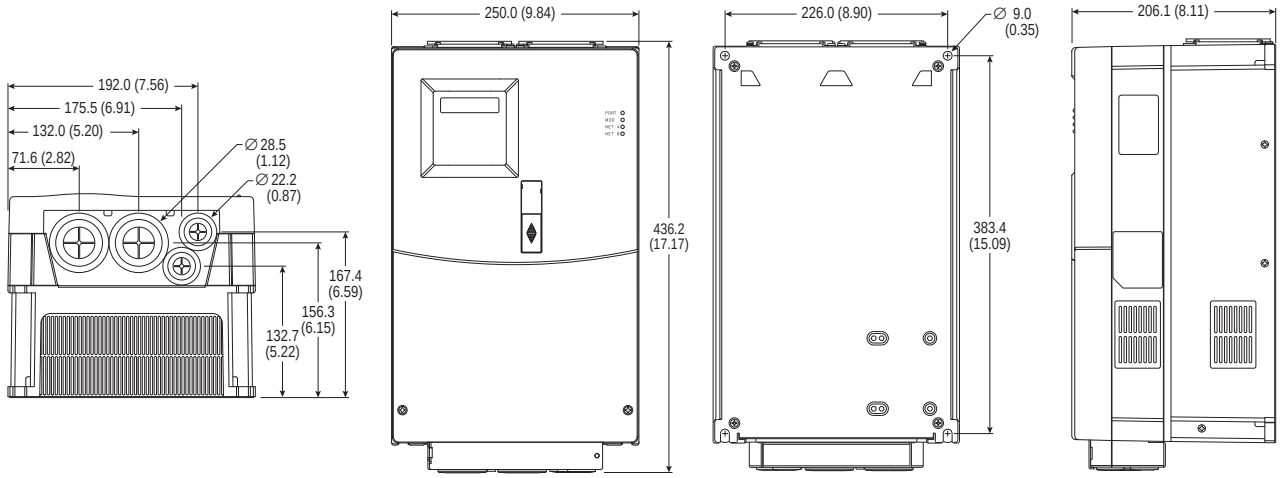
Ratings are in kW and (HP).

Frame	240V AC – 3-Phase		480V AC – 3-Phase	
C	2.2 (3.0)	5.5 (7.5)	2.2 (3.0)	7.5 (10)
	3.7 (5.0)	7.5 (10)	4.0 (5.0)	11 (15)
			5.5 (7.5)	15 (20)
D	11 (15)	18.5 (25)	18.5 (25.0)	30 (40)
	15 (20)	22 (30)	22.0 (30.0)	
E	30 (40)		37.0 (50.0)	55 (75)
	37 (50)		45.0 (60.0)	75 (100)
F	–		90 (125)	110 (150)
G	–		132 (200)	160 (250)
H	–		200 (300)	250 (350)

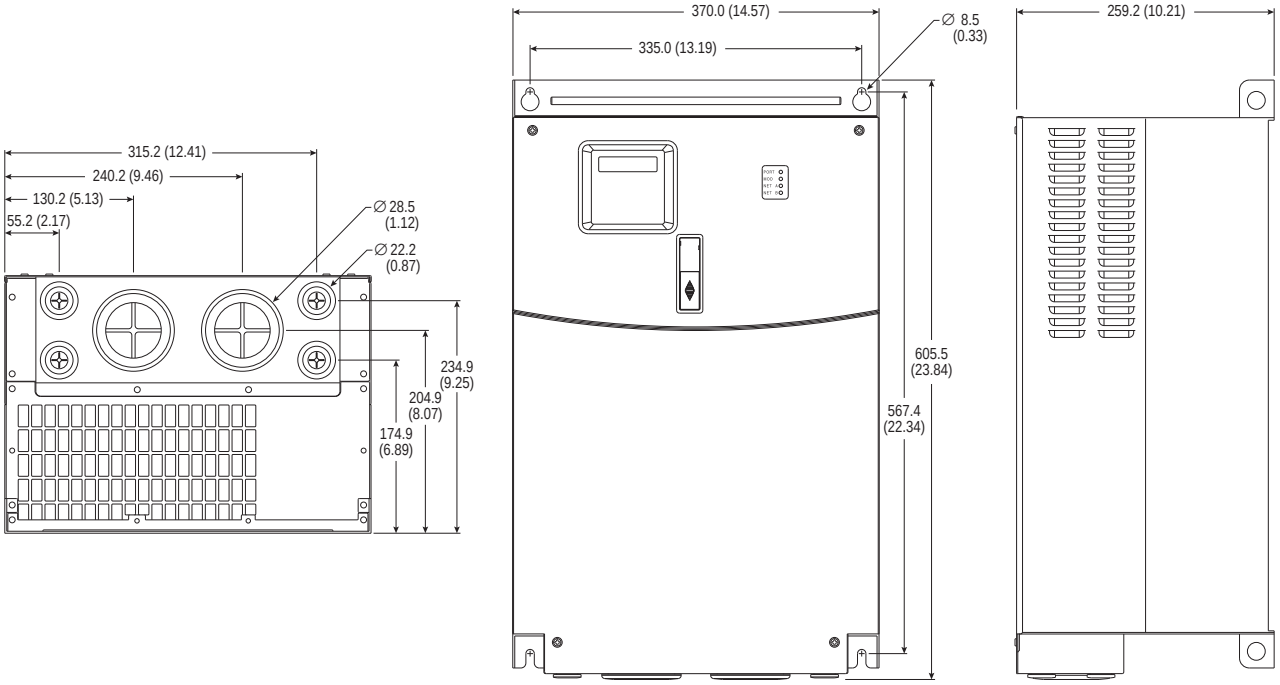
Panel Mount Drive



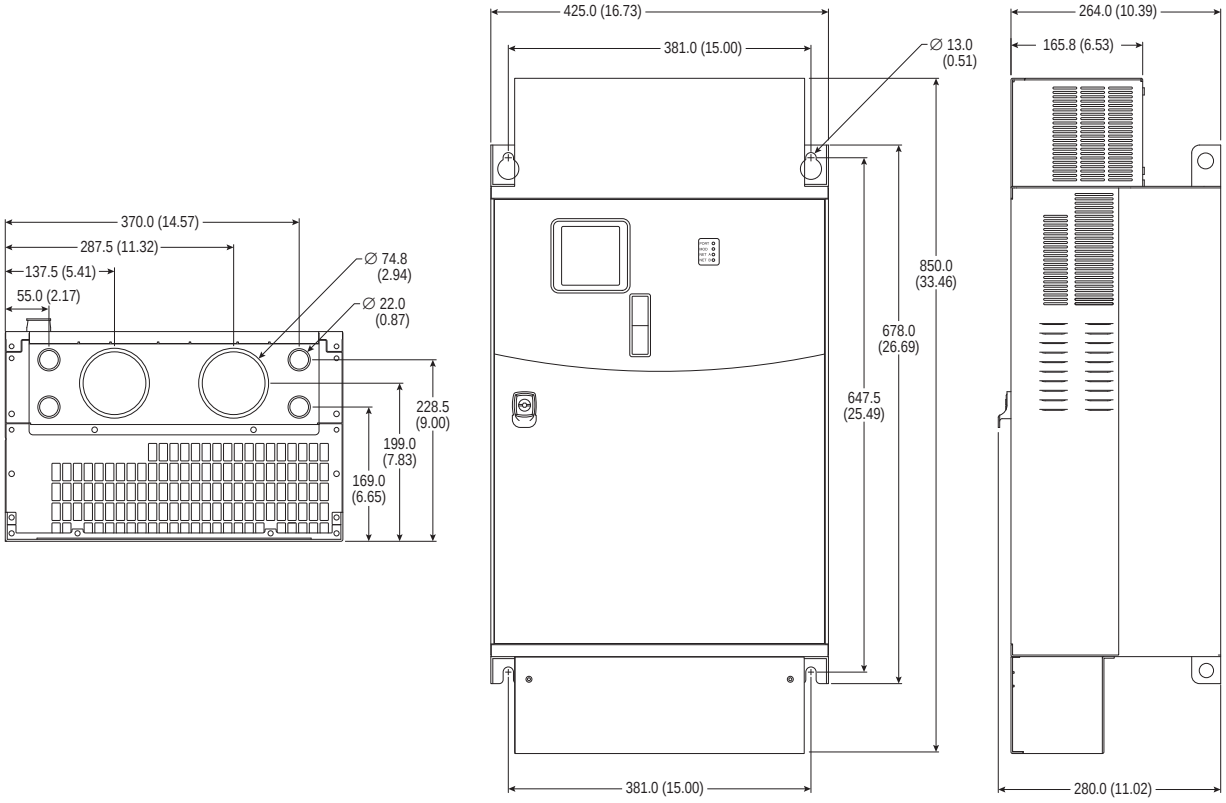
Frame C
(Shown with IP30, NEMA/UL Type 1 conversion kit.)



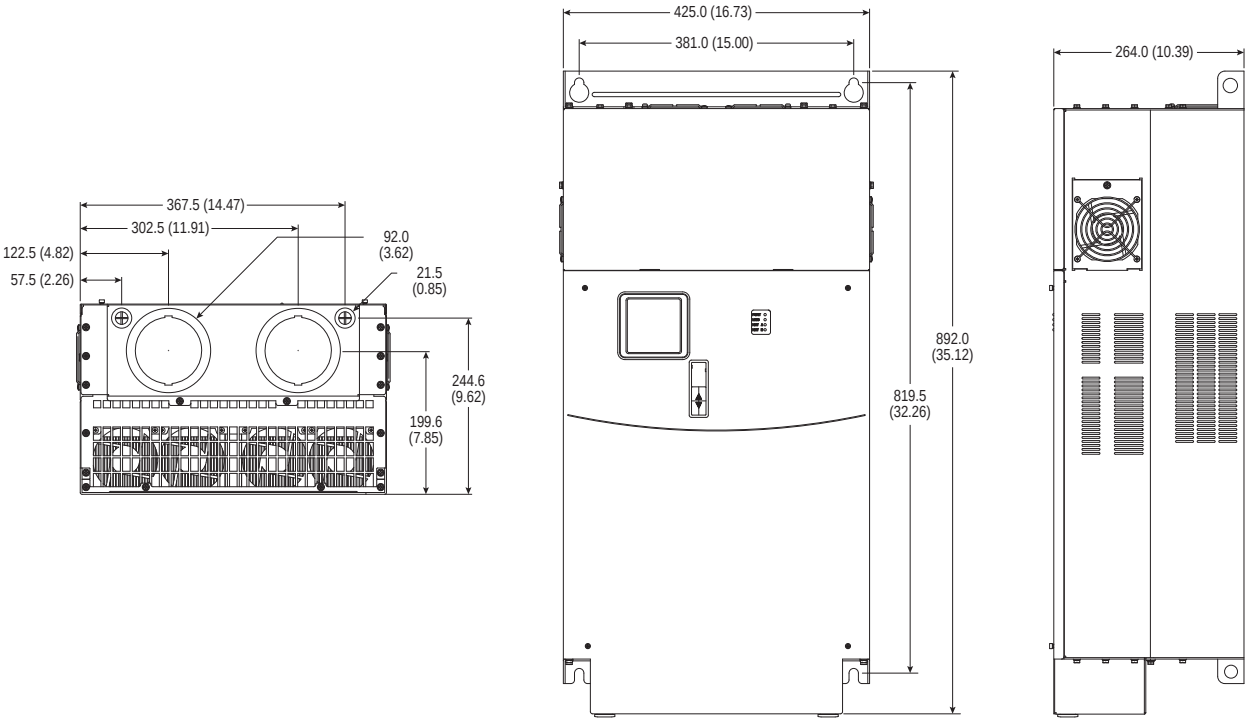
Frame D



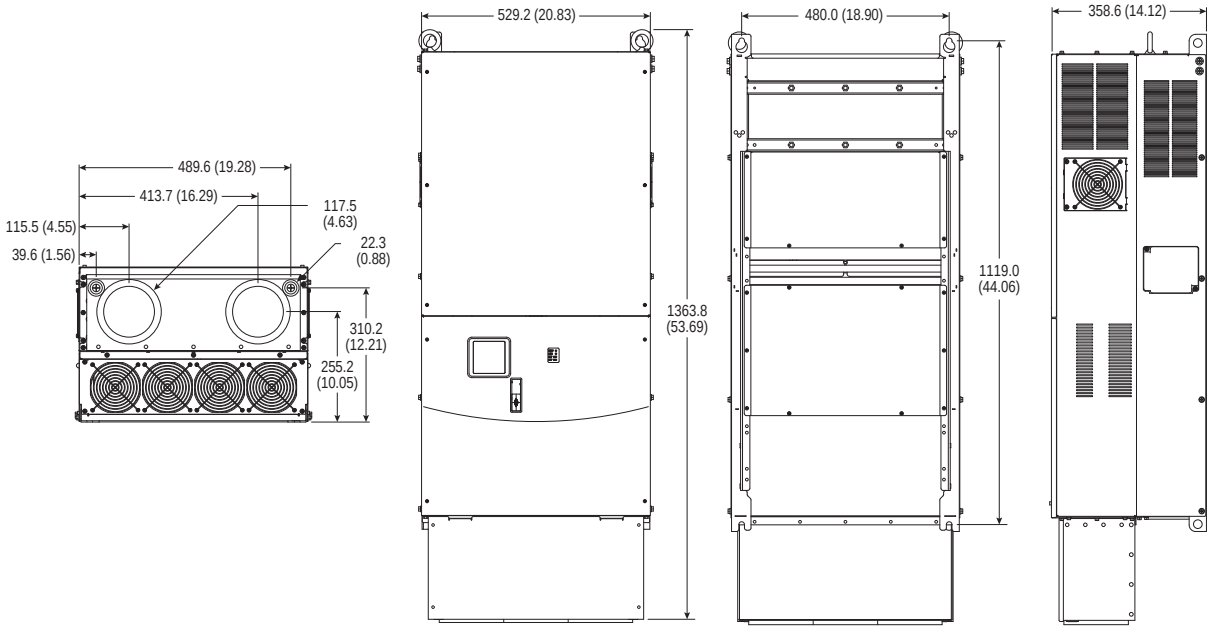
Frame E



Frame F

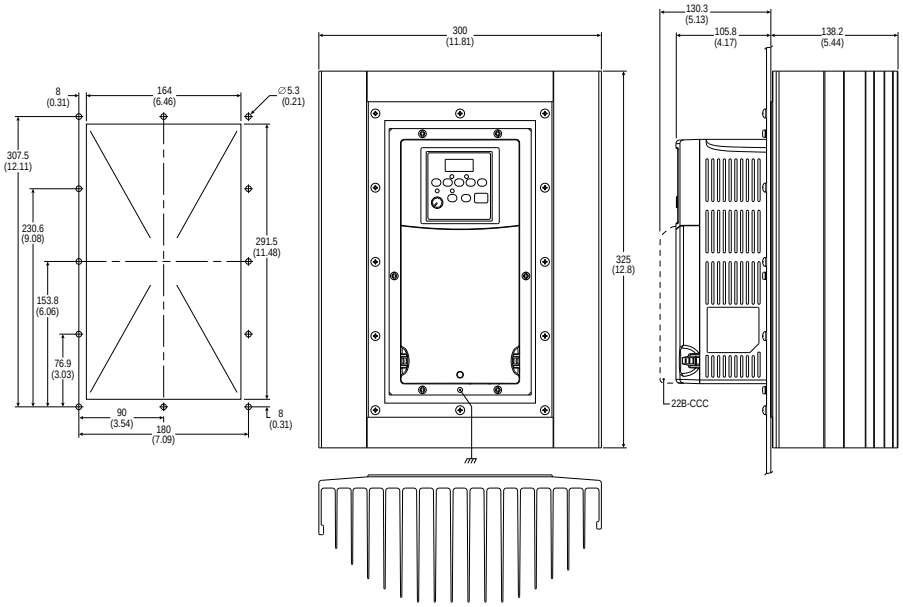


Frame G



Frame H

Flange Mount Drive



Frame C — Flange Mount

EMC Line Filters

Dimensions are in millimeters and (inches)
Catalog Numbers: 22-RF018-CS, 22-RF026-CS, 22-RF034-CS